IN THE CLAIMS:

Please amend the claims as follows:

Claims 1-13 (canceled).

14. (previously presented) A nucleic acid of ORF-R of Human Immunodeficiency Virus Type 1 (HIV-1) comprising the sequence:

									83 TGGTCAAA	
GTAGT		TGGAT		ACTGT						
CCAGC		ATGGG		AGCAG				AAAA		
		AGTAG		CAGCA		CAATG		TGTGC		
TAGAA	8460 GCACA	AGAGG:		GAGGT				ACCTC		
CCTTT		CAATG		CAAGG				GCCAC:		
AAAAG	8560 AAAAG	GGGGG	8570 ACTGG	AAGGG		TCACT		CGAAGA		
ATATC	8610 CTTGA	TCTGT		TACCA		AAGGC'				
	8660 CTACA	CACCA	GGGCC	AGGGG'	rcaga		ACTGA	CCTTT	GGATG	
GTGCT.		CTAGT	ACCAG	TTGAG	CCAGA	TAAGG	TAGAA	GAGGC	CAATA	
AAGGA		CACCA	GCTTG	TTACA	CCCTG	TGAGC	CTGCA		rggat	
GACCC'	8810 TGAGA	GAGAA		AGAGTO						

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8860 8870 8890 8900
TCATCACGTG GCCCGAGAGC TGCATCCGGA GTACTTCAAG AACTGC,

wherein the nucleic acid is in an expression vector that expresses a protein comprising the amino acid sequence:

MGGKWSKSSVVGWPTVRERMRRAEPAADGVGAASRDLEKHGAITSSNTAAT NAACAWLEAQEEEEVGFPVTPQVPLRPMTYKAAVDLSHFLKEKGGLEGLIHSQRRQDI LDLWIYHTQGYFPDWQNYTPGPGVRYPLTFGWCYKLVPVEPDKVEEANKGENTSLLH PVSLHGMDDPEREVLEWRFDSRLAFHHVARELHPEYFKNC.

- 15. (previously presented) The nucleic acid of claim 14, wherein the nucleic acid is in a eukaryotic expression vector.
- 16. (previously presented) A nucleic acid of ORF-R of Human Immunodeficiency Virus Type 1 (HIV-1) comprising the sequence:

8250	8260	8270	8280	8290	8300
GA CAGGG	CTTGG AAAGG	SATTTT GCTAT	CAAGAT GGGTO	GCAAG TGGT	CAAAAA
0210	0220	0220	0240	0250	
8310	8320	8330	8340	8350	
GTAGTGTGGT	TGGATGGCCT	ACTGTAAGGG	AAAGAATGAG	ACGAGCTGAG	
0360	0370	0200	0200	0400	
8360	8370	8380		8400	
CCAGCAGCAG	ATGGGGTGGG	AGCAGCATCT	CGAGACCTGG	AAAAACATGG	
0.4.1.0	2.4.2.2	0.400			
8410	8420	8430	8440	8450	
AGCAATCACA	AGTAGCAATA	CAGCAGCTAC	CAATGCTGCT	TGTGCCTGGC	
8460	8470	8480	8490	8500	
TAGAAGCACA	AGAGGAGGAG	GAGGTGGGTT	TTCCAGTCAC	ACCTCAGGTA	
8510	8520	8530	8540	8550	
CCTTTAAGAC	CAATGACTTA	CAAGGCAGCT	GTAGATCTTA	GCCACTTTTT	
8560	8570	8580	8590	8600	
AAAAGAAAAG	GGGGGACTGG	AAGGGCTAAT	TCACTCCCAA	CGAAGACAAG	
8610	8620	8630	8640	8650	
ATATCCTTGA	TCTGTGGATC	TACCACACAC	AAGGCTACTT	CCCTGATTGG	

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8660	8670	8680	8690	8700
CAGAACTACA	CACCAGGGCC	AGGGGTCAGA	TATCCACTGA	CCTTTGGATG
8710	8720	8730	8740	8750
GTGCTACAAG	CTAGTACCAG	TTGAGCCAGA	TAAGGTAGAA	GAGGCCAATA
8760	8770	8780	8790	8800
AAGGAGAGAA	CACCAGCTTG	TTACACCCTG	TGAGCCTGCA	TGGAATGGAT
8810	8820	8830	8840	8850
GACCCTGAGA	GAGAAGTGTT	AGAGTGGAGG	TTTGACAGCC	GCCTAGCATT
8860 TCATCACGTG	8870 GCCCGAGAGC	8890 TGCATCCGGA	8900 GTACTTCAAG	

wherein the nucleic acid is in a yeast expression vector that expresses a protein comprising the amino acid sequence:

MGGKWSKSSVVGWPTVRERMRRAEPAADGVGAASRDLEKHGAITSSNTAAT
NAACAWLEAQEEEEVGFPVTPQVPLRPMTYKAAVDLSHFLKEKGGLEGLIHSQRRQDI
LDLWIYHTQGYFPDWQNYTPGPGVRYPLTFGWCYKLVPVEPDKVEEANKGENTSLLH
PVSLHGMDDPEREVLEWRFDSRLAFHHVARELHPEYFKNC.

17. (previously presented) A recombinant prokaryotic expression vector comprising a nucleic acid fragment of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the vector expresses a protein comprising the amino acid sequence:

MGGKWSKSSVVGWPTVRERMRRAEPAADGVGAASRDLEKHGAITSSNTAAT
NAACAWLEAQEEEEVGFPVTPQVPLRPMTYKAAVDLSHFLKEKGGLEGLIHSQRRQDI
LDLWIYHTQGYFPDWQNYTPGPGVRYPLTFGWCYKLVPVEPDKVEEANKGENTSLLH
PVSLHGMDDPEREVLEWRFDSRLAFHHVARELHPEYFKNC.

18. (previously presented) A recombinant *E. coli* expression vector comprising a nucleic acid fragment of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the vector expresses a protein comprising the amino acid sequence:

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MGGKWSKSSVVGWPTVRERMRRAEPAADGVGAASRDLEKHGAITSSNTAAT
NAACAWLEAQEEEEVGFPVTPQVPLRPMTYKAAVDLSHFLKEKGGLEGLIHSQRRQDI
LDLWIYHTQGYFPDWQNYTPGPGVRYPLTFGWCYKLVPVEPDKVEEANKGENTSLLH
PVSLHGMDDPEREVLEWRFDSRLAFHHVARELHPEYFKNC.

19. (previously presented) A recombinant yeast expression vector comprising a nucleic acid fragment of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the vector expresses a protein comprising the amino acid sequence:

MGGKWSKSSVVGWPTVRERMRRAEPAADGVGAASRDLEKHGAITSSNTAAT
NAACAWLEAQEEEEVGFPVTPQVPLRPMTYKAAVDLSHFLKEKGGLEGLIHSQRRQDI
LDLWIYHTQGYFPDWQNYTPGPGVRYPLTFGWCYKLVPVEPDKVEEANKGENTSLLH
PVSLHGMDDPEREVLEWRFDSRLAFHHVARELHPEYFKNC.

20. (previously presented) A nucleic acid of ORF-R of Human Immunodeficiency Virus Type 1 (HIV-1) comprising the sequence:

8250	8260	8270	8280	8290	8300
GA CAGG	GCTTGG AAAG	GATTTT GCTAT	FAAGAT GGGTG	GCAAG TGGT	AAAAA
8310	8320	8330	8340	8350	
GTAGTGTGGT	TGGATGGCCT	ACTGTAAGGG	AAAGAATGAG	ACGAGCTGAG	
8360	8370	8380	8390	8400	
CCAGCAGCAG	ATGGGGTGGG	AGCAGCATCT	CGAGACCTGG	AAAAACATGG	
8410	8420	8430	8440	8450	
AGCAATCACA	AGTAGCAATA	CAGCAGCTAC	CAATGCTGCT	TGTGCCTGGC	
8460	8470	8480	8490	8500	
TAGAAGCACA	AGAGGAGGAG	GAGGTGGGTT	TTCCAGTCAC	ACCTCAGGTA	
8510	8520	8530	8540	8550	
CCTTTAAGAC	CAATGACTTA	CAAGGCAGCT	GTAGATCTTA	GCCACTTTT	
8560	8570	8580	8590	8600	
AAAAGAAAAG	GGGGGACTGG	AAGGGCTAAT	TCACTCCCAA	CGAAGACAAG	

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8610	8620	8630	8640	8650
ATATCCTTGA	TCTGTGGATC	TACCACACAC	AAGGCTACTT	CCCTGATTGG
8660	8670	8680	8690	8700
CAGAACTACA	CACCAGGGCC	AGGGGTCAGA	TATCCACTGA	CCTTTGGATG
8710	8720	8730	8740	8750
GTGCTACAAG	CTAGTACCAG	TTGAGCCAGA	TAAGGTAGAA	GAGGCCAATA
8760	8770	8780	8790	8800
AAGGAGAGAA	CACCAGCTTG	TTACACCCTG	TGAGCCTGCA	TGGAATGGAT
8810	8820	8830	8840	8850
GACCCTGAGA	GAGAAGTGTT	AGAGTGGAGG	TTTGACAGCC	GCCTAGCATT
8860	8870	8890	8900	AACTGC,
TCATCACGTG	GCCCGAGAGC	TGCATCCGGA	GTACTTCAAG	

wherein the sequence is linked to a promoter in an expression vector that allows the expression of a protein comprising the amino acid sequence:

MGGKWSKSSVVGWPTVRERMRRAEPAADGVGAASRDLEKHGAITSSNTAAT
NAACAWLEAQEEEEVGFPVTPQVPLRPMTYKAAVDLSHFLKEKGGLEGLIHSQRRQDI
LDLWIYHTQGYFPDWQNYTPGPGVRYPLTFGWCYKLVPVEPDKVEEANKGENTSLLH
PVSLHGMDDPEREVLEWRFDSRLAFHHVARELHPEYFKNC.

- 21. (previously presented) The nucleic acid of claim 20, wherein the nucleic acid is linked to a promoter in a prokaryotic expression vector.
- 22. (previously presented) The nucleic acid of claim 21, wherein the nucleic acid is linked to a promoter in an *E. coli* expression vector.
- 23. (previously presented) The nucleic acid of claim 20, wherein the nucleic acid is linked to a promoter in a yeast expression vector.
- 24. (previously presented) The nucleic acid of claim 20, wherein the nucleic acid is linked to a promoter in a mammalian expression vector.

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25. (previously presented) An isolated nucleic acid that expresses Nef protein of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the sequence hybridizes under stringent conditions to a DNA comprising the sequence:

	250 8260 GA CAGGGCTTGG AAAGGA									
	8310		8320		8330		8340		8350	
GTAGT	'GTGGT	TGGAT	GGCCT	ACTGT.	AAGGG	AAAGA	ATGAG	ACGAG	CTGAG	
CCAGC	AGCAG	ATGGG	G'I'GGG	AGCAG	CATCT	CGAGA	CCTGG	AAAAA	CATGG	
	8410		0120		9420		0110		0450	
מככא מ								TGTGC		
AUCAA	ICACA	AGIAG	CAAIA	CAUCA	GCIAC	CAAIG	CIGCI	19190	LIGGC	
	8460		8470		8480		8490		8500	
TAGAA		AGAGG.						ACCTC		
CCTTT	AAGAC	CAATG	ACTTA	CAAGG	CAGCT	GTAGA	TCTTA	GCCAC:	TTTTT	
AAAAG.	AAAAG	GGGGG	AC'I'GG	AAGGG	CTAAT	TCACT	CCCAA	CGAAGA	ACAAG	
	8610		9620		9630		9640		0650	
ATATC		TCTGT						CCCTGA		
111111	CIION	10101	JOATE	IACCA	CACAC	AAUUC	incii	CCCIGA	1100	
	8660		8670		8680		8690		8700	
CAGAA	CTACA	CACCA						CCTTTC		
	8710		8720							
GTGCT.	ACAAG	CTAGT	ACCAG	TTGAG	CCAGA	TAAGG'	TAGAA	GAGGCC	CAATA	
77007										
AAGGA	GAGAA	CACCA	3C.I.I.G	'I"I'ACA	CCCTG	TGAGC	CTGCA	TGGAAT	GGAT	
	8810		2220		8830		0010		9950	
GACCC								GCCTAC		
	- 511041	J. 101 H 10		11011011	22100	11101		CCIAC	CALL	
	8860		8870		8890		8900			
TCATC								AACTGO	3.	

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26. (canceled)

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27. (previously presented) An isolated nucleic acid that encodes the following amino acid sequence:

MGGKWSKSSVVGWPTVRERMRRAEPAADGVGAASRDLEKHGAITSSNTAATNAACA WLEAQEEEEVGFPVTPQVPLRPMTYKAAVDLSHFLKEKGGLEGLIHSQRRQDILDLWI YHTQGYFPDWQNYTPGPGVRYPLTFGWCYKLVPVEPDKVEEANKGENTSLLHPVSL HGMDDPEREVLEWRFDSRLAFHHVARELHPEYFKNC.

28. (previously presented) A method of expressing an HIV-1 protein comprising inserting a recombinant nucleic acid molecule that encodes the following amino acid sequence:

MGGKWSKSSVVGWPTVRERMRRAEPAADGVGAASRDLEKHGAITSSNTAATNAACA
WLEAQEEEEVGFPVTPQVPLRPMTYKAAVDLSHFLKEKGGLEGLIHSQRRQDILDLWI
YHTQGYFPDWQNYTPGPGVRYPLTFGWCYKLVPVEPDKVEEANKGENTSLLHPVSL
HGMDDPEREVLEWRFDSRLAFHHVARELHPEYFKNC

into a host cell under conditions suitable for the expression of the amino acid sequence.

29. (previously presented) A method of making a recombinant nucleic acid molecule that encodes the following amino acid sequence:

MGGKWSKSSVVGWPTVRERMRRAEPAADGVGAASRDLEKHGAITSSNTAATNAACA
WLEAQEEEEVGFPVTPQVPLRPMTYKAAVDLSHFLKEKGGLEGLIHSQRRQDILDLWI
YHTQGYFPDWQNYTPGPGVRYPLTFGWCYKLVPVEPDKVEEANKGENTSLLHPVSL
HGMDDPEREVLEWRFDSRLAFHHVARELHPEYFKNC

comprising replicating the recombinant nucleic acid molecule in a host cell.

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